UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,084	08/03/2001	Trent R. Carter	125.005US01	8750

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EXAMINER
NAWAZ, ASAD M

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/922,084	CARTER, TRENT R.
	Examiner	Art Unit	
	Asad M. Nawaz	2155	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 December 2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-49* is/are pending in the application.

    4a) Of the above claim(s) *48 and 49* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-47* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the election received 12/19/05. Claims 1-47 were

elected. Accordingly, claims 1-47 are pending and 48-49 have been withdrawn from

consideration.

Response to Arguments

2.   Applicant's arguments with respect to the rejection(s) of claim(s) 1-47 under

Rappaport have been fully considered and are persuasive. Therefore, the rejection has

been withdrawn. However, upon further consideration, a new ground(s) of rejection is

made in view of Rappaport further in view of Di Huo.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-47 are rejected under 35 U.S.C. 103(a) as being anticipated by

Rappaport et al (US Patent No. 6,317,599) hereinafter referred to as Rappaport further

in view of Di Huo et al (USPN: 6157838).

As to claim 1, Rappaport teaches a tool for providing a site survey of a wireless

network comprising: a network server having a server application module to create and

distribute data packets and a plurality of access points; (Abstract; col 3, lines 33-40 and 58-67)

a portable computer in wireless communication with the plurality of access points, the portable computer having a two-dimensional surface area map on a data grid; (Fig. 1; col 4, lines 1-10; col 5, lines 39-53)

and wherein the portable computer receives data packets sent by the network server and includes instructions that are adapted to compute at least one of throughput and packet error rate at selected locations within a network coverage area and display the at least one of throughput and packet error rate on the two-dimensional surface area map to provide a site survey of the wireless network coverage. (Abstract; col 4, lines 25-40; col 8, lines 11-33)

However, Rappaport is method for enabling a designer to keep track of network behavior via modeling and does not explicitly indicate access points coupled to send and receive data packets from the server. Di Huo et al teaches monitoring actual network traffic including data packets wherein the access points are coupled to send and receive data packets from the server (abstract; Fig 4; col 1, lines 39-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Di Huo into those of Rappaport to make the system more accurate. The physical testing of network resources will allow the examination of such transferring of network data packets via access points to be more accurate because although mathematical models can be extremely accurate, there is no measure like actual physical testing.

Claims 14, 28, and 30 contain the same limitations as claim 1 above and thus are rejected under similar rationale.

As to claim 2, Rappaport teaches the tool for providing a site survey of a wireless network of claim 1 further comprising: a distribution system to coupled signals between the access points and the network server. (col 3, lines 29-67)

As to claim 3, Rappaport teaches the tool for providing a site survey of a wireless network of claim 1 wherein the server distributes the data packets to all of the access points simultaneously thereby exposing co-channel interference. (col 6, lines 6-9; col 6, lines 32-57; col 11, lines 20-43)

Claim 15, and 32 contain the same limitations as claim 3 above and thus are rejected under similar rationale.

As to claim 4, Rappaport teaches the tool for providing a site survey of a wireless network of claim 1 wherein the data grid has a user definable grid size, grid increment, grid line size and a surface area line size. (col 8, lines 11-33; col 11, lines 20-43)

Claim 16 contains the same limitations as claim 4 above and thus is rejected under similar rationale.

As to claim 5, Rappaport teaches the tool for providing a site survey of a wireless network of claim 1 wherein the two-dimensional surface are map displays the site survey with lines using empirical data. (Figs 3-4; col 8, lines 34-48)

Claim 17 contains the same limitations as claim 5 above and thus is rejected under similar rationale.

As to claim 6, Rappaport teaches the tool for providing a site survey of a wireless network of claim 1 wherein the portable computer further comprises: a data collection module to collect data sent from the access points and to calculate throughput and packet error rate; (Abstract; col 4, lines 27-36)

a data conditioning module to place relative data points locations on the data grid, to interpolate and extrapolate data and to set parametric limits on the data; (col 4, lines 1-47; col 8, lines 11-33)

a surface mapping module to map the data from the data conditioning module to the two-dimensional surface map; (col 4, lines 1-47; col 8, lines 11-33)

and a graphical interface module to communicate with and link the data collection module, the data conditioning module, the surface mapping module and the registry module. (Fig. 12; col 4, lines 1-47; col 8, lines 11-33)

Claims 19 and 31 contain the same limitations as claim 6 above and thus are rejected under similar rationale.

As to claim 7, Rappaport teaches the tool for providing a site survey of a wireless network of claim 6 wherein the data collection module is hardware independent. (col 3, lines 42-56; col 6, lines 5-67)

Claim 21 contains the same limitations as claim 7 above and thus is rejected under similar rationale.

As to claim 8, Rappaport teaches, the tool for providing a site survey of a wireless network of claim 6 wherein the data conditioning module limits data to a user defined parametric minimum and maximum. (col 6, lines 7-9)

Claim 22 contains the same limitations as claim 8 above and thus is rejected under similar rationale.

As to claim 9, Rappaport teaches the tool for providing a site survey of a wireless network of claim 8 wherein the surface area mapping module uses the data parametric minimum and maximum of the data conditioning module to calculate the positioning of lines of different colors on the surface area map to convey wireless network coverage of a particular area. (col 8, lines 11-33)

Claim 23 contains the same limitations as claim 9 above and thus is rejected under similar rationale.

As to claim 10, Rappaport teaches the tool for providing a site survey of a wireless network of claim 9 wherein the surface area map uses three different colors to distinguish the quality of wireless network coverage. (col 8, lines 11-33)

Claims 24 and 29 contain the same limitations as claim 10 above and thus are rejected under similar rationale.

As to claim 11, Rappaport teaches the tool for providing a site survey of a wireless network of claim 6 wherein the graphical interface module further comprises: iconic markers to indicate data points. (col 3, lines 29-57; col 4, lines 1-47)

Claim 25 contains the same limitations as claim 11 above and thus is rejected under similar rationale.

As to claim12, Rappaport teaches the tool for providing a site survey of a wireless network of claim 11 wherein the data points are dropped onto the surface area

map to indicate the locations where the portable computer receives the data packets sent by the network server. (col 4, lines 1-47)

Claim 26 contains the same limitations as claim 12 above and thus is rejected under similar rationale.

As to claim 13, Rappaport teaches the tool for providing a site survey of a wireless network of claim 11 wherein the data points mark the location of the access points. (col 3, lines 29-57)

Claim 27 contains the same limitations as claim 13 above and thus is rejected under similar rationale.

As to claim 18, Rappaport teaches the tool for providing a site survey of a wireless network of claim 14 wherein the client sends a request to the network server to create and distribute the data packets. (Abstract; col 3, lines 33-40 and 58-67)

As to claim 20, Rappaport teaches the tool for providing a site survey of a wireless network of claim 19 wherein the client further comprises: a registry module to save to and read from a window registry.(col 8, lines 34-67)

As to claim 33, Rappaport teaches the method of claim 31 wherein a program in the portable computer calculates throughput and packet error rate. (Abstract; col 4, lines 27-36)

As to claim 34, Rappaport teaches a method of providing a site survey of a wireless network comprising: importing a floor plan image of a building to be surveyed into a portable computer wirelessly coupled to a network server via access points; (Abstract; col 3, lines 42-56; col 4, lines 1-47)

marking the location of the access points on the imported floor plan image; (col 3,

lines 33-56)

positioning the portable computer at selected locations within the building; (col 3,

lines 33-67)

marking the locations of the portable computer on the imported floor plan image;

(col 3, lines 33-56)

sending a request signal from the portable computer to the network server via the

access point requesting a signal containing packets be created by the network server

and sent back to the portable computer while the portable computer is at the then

current location marked on the imported floor plan image; receiving the request signal at

the network server via the access points; generating the packet requests; sending the

packet requests multicast to the portable computer; (Abstract; col 3, lines 33-40 and 58-

67; col 6, lines 2-61)

computing the packet error rate and throughput;(Abstract; col 4, lines 27-36)

and displaying the quality of signal strength based on the packet rate and

throughput on a two-dimensional vector map imposed over the imported floor plan

image. (Abstract; col 4, lines 27-36)

Claims 38 and 43 contain similar limitations as claim 34 above and thus are

rejected under similar rationale.

As to claim 35, Rappaport teaches the method of claim 34 further comprising:

applying a parametric qualification on the data to display the quality of signal strength.

(Abstract; col 4, lines 27-36)

Claims 40 and 45 contain similar limitations as claim 35 above and thus are

rejected under similar rationale.

As to claim 36, Rappaport teaches the method of claim 35 wherein applying the

parametric qualification on the data further comprises using lines of a first color to

indicate areas having a signal strength higher than a user defined upper limit; using

lines of a second color to indicate areas having a signal strength below a user defined

lower limit; and using lines of a third color to indicate signal strength between the upper

and lower limits. (col 8, lines 11-33)

Claims 41 and 46 contain similar limitations as claim 36 above and thus are

rejected under similar rationale.

As to claim 37, Rappaport teaches the method of claim 34 wherein request

signals sent at different locations, the more detailed the site survey. (cols 5 and 6, lines

63-67 and 1-9)

As to claim 39, Rappaport teaches the method of claim 38 wherein the client

generates a request to the server to send the packet signal back to the client when a

location of the client is marked on the floor plan image. (col 4, lines 25-36)

As to claim 42, Rappaport teaches the method of claim 41 wherein the first,

second and third colors are displayed as lines on the two-dimensional vector map. (col

8, lines 11-33)

As to claim 44, Rappaport teaches the computer-readable medium including

instructions for implementing a method of claim 43 further including: generating a

request command to send a packet signal with a client; and transmitting the request to

the server. (col 4, lines 25-36)

As to claim 47, Rappaport teaches the computer-readable medium including

instructions for implementing a method of claim 46 wherein the first, second and third

colors are displayed as lines on the two-dimensional vector map. (col 8, lines 11-33)

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Asad M. Nawaz whose telephone number is (571) 272-

3988. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

AMN

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER